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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/560,763

12/14/2005

Bernd Rumpf

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EXAMINER

GISSEL, GUNNAR J

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/560,763	Applicant(s) RUMPF, BERND	
	Examiner Gunnar J. Gissel	Art Unit 2856	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 20 February 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,5,7-9,11 and 14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5/22/2008</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. In response to applicant's telephone inquiry on 6/31/2008 regarding the last Office action, the following corrective action is taken.

The period for reply of 3 MONTHS set in said Office Action is restarted to begin with the mailing date of this letter.

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1, 3, 5, 7-9, 11, and 14 rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 3,638,491 to Atlee Hart (Hart) with teachings from US Patent 3,404,215 to D.P. Burks et al. (Burks).

Regarding Claims 1,3, 5, 7-9, 11, and 14 Hart discloses an electronic circuit arrangement in a motor vehicle fuel tank (Hart,, comprising: arranging one or more electronic modules on a substrate (Hart, figure 1, substrate and electronic modules 17); and fixating said substrate with respect to a fuel tank wall (Hart, column 1, lines 40-41; mounting the sensor in the fuel tank results in the substrate17 being fixed with respect to all parts of the fuel tank, including the fuel tank wall). Additionally, the substrate Hart discloses is suitable for fixating to the fuel tank wall because Hart fixes it to the fuel tank wall (Hart, column 1, lines 40-41). Fix, fixing and fixating are all defined as to make fast, firm or stable (fix, fixating. Dictionary.com. Dictionary.com Unabridged (v1.1). Random House, Inc. .<http://dictionary.reference.com/browse/fixating>
<http://dictionary.reference.com/browse/fixating> (accessed: May 08, 2008).). Hart also

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discloses said substrate comprises one or more electrical through-connections to an outside of said fuel tank (Hart, figure 1).

Hart does disclose that the electronic modules are disposed in an encapsulated space and that the substrate (and by extension the electronic modules) are connected to the cap via soldering, but Hart does not explicitly disclose that the cap is soldered to the substrate, which implies a more direct connection to the substrate, without intervening material.

However, previously disclosed art to Burks regards hermetically sealing electronic modules (Burks, one or more electronic modules shown in figure 4) via soldering a cap to a substrate (Burks, column 2, lines 7-11, cap 12, solder 26, substrate 14); which constitutes forming an encapsulated space that, said one or more electronic modules being disposed in said encapsulated space and is separated from any fuel or vapour outside said encapsulated space. Hermetically sealing electronic modules seals them away from all fluid, including vapour and fuel. Burks also discloses said substrate comprises one or more electrical through-connections to an outside of said fuel tank (Burks, column 2, lines 10-11).

It would have been obvious to one of ordinary skill in the art, at the time of the invention to combine Hart with teachings from Burks because Burks teaches that soldering a cap results in a low volume and weight structure (Burks, column 1, lines 38-40), and because soldering is a well known method of connecting two different material together, especially when one is thin metal or the like, such that welding or brazing is difficult or non-cost effective, and it is well known that soldered joints are an easy way of

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achieving a fuel and vapour-tight seal, and it is also well known that solder does not lose its fuel and vapour tight efficacy when exposed to fuel. Burks also discloses that the substrate is a ceramic substrate (Burks, column 2, line 25)

3. Claims 6, 12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hart with teachings from Burks as applied to claims 3, 7 and 9 above, and further in view of US Patent 5,832,772 to Thomas McEwan (McEwan).

Regarding Claims 6, 12 and 15, Hart discloses a device, but does not explicitly disclose that the electronic circuit arrangement contains a magnetically driven circuit or an ultrasound driven circuit.

McEwan discloses that said one or more electronic modules comprise a magnetically driven circuit or an ultrasound driven circuit for effecting said measuring (McEwan, column 1, line 30).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine McEwan with Hart because Hart's capacitive sensor can lose accuracy as grime and other coatings form on the walls of the container near the sensor (column 1, lines 25-30) and McEwan's method of sensing liquid level will not cause any unforeseen consequences when combined with Hart's substrate, cap and mount, even when Hart is modified by Burks's soldered cap.

Response to Arguments

4. Applicant's arguments with respect to claims 1-15 have been considered but are moot in view of the new ground(s) of rejection.

5. The withdrawal of Claims 2, 4, 10, and 13 is acknowledged

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gunnar J. Gissel whose telephone number is (571)270-3411. The examiner can normally be reached on Mon-Fri, 7:30AM-5:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (571)272-2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

/Hezron Williams/

Supervisory Patent Examiner, Art Unit 2856